flows, the right grazing strategy can produce dramatic recovery of riparian vegetation and streambanks.

This initial recovery of vegetation should not be confused with achieving the desired long-term condition for the riparian area. Nor is it a substitute for changes in upland grazing management that may be

Harsh climatic conditions, thin soils and low stream sediment levels put many riparian areas at high risk of irreversible damage from improper grazing.

required to restore and maintain the long-term productivity of the watershed.

The longer it takes to implement improved grazing strategies on deteriorated riparian areas and adjacent uplands, the higher the cost in forgone watershed values, including livestock forage, water quality, and fish and wildlife. And the higher the risk of essentially irreversible damage.

Flexibility

Rigid application of a paper grazing system can be a prescription for failure on the ground.

It may be difficult to accurately predict how the riparian area will respond to variables in weather, human and animal behavior, stream runoff and other conditions. In addition, if the riparian area is in a degraded condition, it probably will require a different grazing strategy to start than might be used to maintain the desired condition once it has been achieved.

Commitment

Commitment to steady progress is important to achieve and maintain the desired riparian condition.

Restoring and protecting riparian areas is a long-term job requiring a long-term commitment. A riparian improvement grazing strategy that is contingent upon favorable short-term circumstances, for example, good weather, low hay prices, a strong market for livestock, etc., probably is doomed to eventually fail.

The initial dramatic increase in vegetation possible on many riparian areas is just the first step toward recovery. If this first new growth proves irresistably attractive to a grazier fallen on temporary hard times, years of progress and investment could be quickly wiped out.

Any grazing strategy probably will fail to meet riparian improvement objectives if the livestock operator, or in the case of public lands, the permittee and the land manager, are not committed to making it work.

Everyone involved in the grazing/land management operation should have a clear understanding of the problem, including the on- and off-site costs of degraded riparian areas and uplands. They need to understand where they are starting from. Where they are trying to go. Specifically how they are going to get there. The eventual payoff in increased long-term productivity. And how progress toward the goal will be evaluated.

Monitoring & Evaluation

Many progressive livestock operators routinely monitor their riparian and upland pastures because it is good business.

Monitoring and evaluation are essential to determine progress or lack of progress toward riparian and upland objectives. To signal if, when, and how grazing strategies should be changed in response to changing conditions.

However, monitoring obviously deteriorated conditions, without first changing the management responsible for those conditions, does not seem to be a wise investment. These resources could be better spent monitoring and evaluating the results of implementing new grazing strategies to increase productivity of riparian areas and adjacent uplands.

The nonpoint source provisions of the Clean Water Act bring a new dimension to monitoring of grazed watersheds. States will systematically monitor and evaluate chemical, physical and biological water quality indicators such as sediment load, temperature, dissolved oxygen and fish populations. The results will be used to ensure compliance with state programs adopted to achieve the act's mandate to attain and maintain designated beneficial uses such as drinking water, agricultural water supplies and fish and wildlife production.